

Vol. V
TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1938

No. 3

**THE SCHRIBER-SCHROTH COMPANY,
PETITIONER,**

vs.

**THE CLEVELAND TRUST COMPANY, CHRYSLER
CORPORATION,**

No. 4

**THE ABERDEEN MOTOR SUPPLY COMPANY,
PETITIONER,**

vs.

**THE CLEVELAND TRUST COMPANY, CHRYSLER
CORPORATION.**

No. 5

THE F. E. ROWE SALES COMPANY, PETITIONER,

vs.

**THE CLEVELAND TRUST COMPANY, CHRYSLER
CORPORATION.**

**ON WRITS OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT
OF APPEALS FOR THE SIXTH CIRCUIT.**

PETITION FOR CERTIORARI FILED JANUARY 7, 1938.

CERTIORARI GRANTED MAY 31, 1938.

United States Circuit Court of Appeals
FOR THE SIXTH CIRCUIT.

THE CLEVELAND TRUST COMPANY,
CHRYSLER CORPORATION,

Plaintiffs-Appellants,

vs.

THE SCHRIEBER-SCHROTH COMPANY,
Defendant-Appellee.

No. 4045.
EQUITY.

THE CLEVELAND TRUST COMPANY,
CHRYSLER CORPORATION,

Plaintiffs-Appellants,

vs.

THE ABERDEEN MOTOR SUPPLY COMPANY,
Defendant-Appellee.

No. 4046.
EQUITY.

THE CLEVELAND TRUST COMPANY,
CHRYSLER CORPORATION,

Plaintiffs-Appellants,

vs.

THE F. E. ROWE SALES COMPANY,
Defendant-Appellee.

No. 4047.
EQUITY.

APPEALS FROM
THE DISTRICT COURT OF THE UNITED STATES,
FOR THE NORTHERN DISTRICT OF OHIO,
EASTERN DIVISION.

SUPPLEMENTARY TRANSCRIPT OF RECORD.

EVANS & MCCOY,
Bulkley Bldg., Cleveland, Ohio,
RICHEY & WATTS,
Union Trust Bldg., Cleveland, Ohio,
Attorneys for Plaintiffs-Appellants.

JOHN H. BRUNINGA,
Railway Exchange Bldg., St. Louis, Missouri,
Kwis, HUDSON & KENT,
Union Trust Bldg., Cleveland, Ohio,
Attorneys for Defendants-Appellees.

United States Circuit Court of Appeals
FOR THE SIXTH CIRCUIT.

THE CLEVELAND TRUST COMPANY,
CHRYSLER CORPORATION,

Plaintiffs-Appellants,

VS.

THE SCHRIEBER-SCHROTH COMPANY,

Defendant-Appellee.

No. 4045.
EQUITY.

THE CLEVELAND TRUST COMPANY,
CHRYSLER CORPORATION,

Plaintiffs-Appellants,

VS.

THE ABERDEEN MOTOR SUPPLY COMPANY,
Defendant-Appellee.

No. 4046.
EQUITY.

THE CLEVELAND TRUST COMPANY,
CHRYSLER CORPORATION,

Plaintiffs-Appellants,

VS.

THE F. E. ROWE SALES COMPANY,
Defendant-Appellee.

No. 4047.
EQUITY.

APPEALS FROM
THE DISTRICT COURT OF THE UNITED STATES,
FOR THE NORTHERN DISTRICT OF OHIO,
EASTERN DIVISION.

SUPPLEMENTARY TRANSCRIPT OF RECORD.

EVANS & McCoy,
Bulkley Bldg., Cleveland, Ohio,
RICHEY & WATTS,
Union Trust Bldg., Cleveland, Ohio,
Attorneys for Plaintiffs-Appellants.

JOHN H. BRUNINGA,
Railway Exchange Bldg., St. Louis, Missouri,
KWIS, HUDSON & KENT,
Union Trust Bldg., Cleveland, Ohio,
Attorneys for Defendants-Appellees.

INDEX.

Equity No. 4046.

Caption	1
Assignment of Errors:	
<i>Group A</i> : Relating to the validity of Gulick patent No. 1,815,733	2
<i>Group B</i> : Relating to infringement of Gulick patent in suit	2
<i>Group C</i> : Relating to the validity of Jardine patent No. 1,763,523	3
<i>Group D</i> : Relating to infringement of Jardine patent in suit	3
<i>Group H</i> : Relating to infringement of Mooers patent in suit	4
Supplementary Praecept	5

Equity No. 4047.

Caption	7
Assignment of Errors:	
<i>Group A</i> : Relating to the validity of Gulick, patent No. 1,815,733	8
<i>Group B</i> : Relating to infringement of Gulick patent in suit	8
<i>Group C</i> : Relating to the validity of Jardine patent No. 1,763,523	10
<i>Group D</i> : Relating to infringement of Jardine patent in suit	10
<i>Group E</i> : Relating to the validity of Maynard patent No. 1,655,968	11
<i>Group F</i> : Relating to infringement of Maynard patent in suit	11
<i>Group G</i> : Relating to the validity of Mooers patent No. 1,402,309	12
<i>Group H</i> : Relating to infringement of Mooers patent in suit	12
Supplementary Praecept	13
Clerk's Certificate	15

2002

CAPTION.

UNITED STATES OF AMERICA,
NORTHERN DISTRICT OF OHIO,
EASTERN DIVISION, SS.

Record of the proceedings of the District Court of the United States within and for the Eastern Division of the Northern District of Ohio, in the causes and matters hereinafter stated, the same being finally disposed of at a regular term of said court begun and held at the City of Cleveland, in said district, on the first Tuesday in April, being the third day of said month, in the year of our Lord one thousand nine hundred and thirty-four and in the one hundred and fifty-eighth year of the Independence of the United States of America, to-wit, on Friday, the 27th day of July, A. D. 1934.

Honorable PAUL JONES,

United States District Judge.

THE CLEVELAND TRUST COMPANY,
CHRYSLER CORPORATION,

VS.

THE AMERIKEN MOTOR SUPPLY COMPANY.

No. 4046.
Equity.

Said action was commenced on the 17th day of October, A. D. 1931 and proceeded to final disposition at the term and day above written and during the progress thereof pleadings and papers were filed, process was issued and returned and orders of the court were made and entered in the order and on the dates hereinafter stated, to-wit:

ASSIGNMENT OF ERRORS.

(Filed April 17, 1936.)

[Case No. 4046.]

Now come plaintiffs, The Cleveland Trust Company and Chrysler Corporation, and present with their accompanying petition for appeal from the final decree entered herein, the following assignment of errors, which are hereinafter grouped with respect to subject matter:

GROUP A.

Assignment of errors relating to the validity of Gulick patent No. 1,815,733.

1. The Court erred in failing to find and hold the Gulick patent No. 1,815,733 good and valid in law, particularly as to claims 1, 11, 12, 13, 15, 18, 22, 27, 28, 29, 30, 33, 35, 36, 37, 38, 41, 42 and 43 thereof, and in failing to sustain plaintiffs' exceptions Nos. 2, 3 and 101.

Assignments 2 to 27, inclusive, same as in case 4045 (R. pp. 1233 to 1239).

GROUP B.

Assignment of errors relating to infringement of the Gulick patent in suit.

28. The Court erred in not holding that defendant has infringed the Gulick patent No. 1,815,733, particularly as to claims 1, 11, 12, 13, 15, 18, 22, 27, 28, 29, 30, 33, 35, 36, 37, 38, 41, 42 and 43 thereof, and in failing to sustain plaintiffs' exceptions Nos. 45 and 102.

29. The Court erred in approving and adopting the Special Master's finding of fact No. 38:

"That defendants' pistons, Exs. 1, * * * and 8 do not embody the structure, function and mode of operation of the Gulick patent in suit."

and in not sustaining plaintiffs' exception (No. 44) to the aforesaid finding of fact No. 38.

30. The Court erred in approving and adopting the Special Master's finding of fact No. 43 and in not sustaining plaintiffs' exception (No. 54) to the following statements and conclusions in the aforesaid finding of fact No. 43:

(a) " * * * that the prior art requires restriction of the (Gulick) patent to the employment of webs which are of sufficient length and thinness to

permit flexing of those webs at the top of the skirt;

- (b) that Exhibit 1 does not employ such characteristic webs;
- (c) that Exhibit 8 does not employ such characteristic webs;"

Assignment 31 same as in case 4045 (R. p. 1240).

32. The Court erred in approving and adopting the Special Master's finding of fact No. 49,

"That such construction and arrangement (of the connectors from the head to the wrist pin boss in Exhibit 8) does not secure the mode of operation contemplated by the Gulick and Jardine patents."

and in not sustaining plaintiff's exception (No. 60) to the aforesaid finding of fact No. 49.

33. The Court erred in approving and adopting the Special Master's finding of fact No. 51:

"That defendants' pistons, Exs. 1, . . . 8 and 9 employ the essential structure, function and mode of operation of the prior art, more particularly the Franquist patent No. 1,153,902 and Exs. 8 and 9, also the Chenard & Walcker French patent No. 468,595."

and in not sustaining plaintiffs' exception (No. 62) to the aforesaid finding of fact No. 51.

34. The Court erred in approving and adopting the Special Master's conclusion of law No. 37:

"That defendant's pistons, Exs. 1, . . . and 8 do not infringe the Gulick patent in suit."

and in not sustaining plaintiffs' exception (No. 89) to the aforesaid finding of fact No. 49.

GROUP C.

Assignment of errors relating to validity of the Jardine patent No. 1,763,523.

Assignments 35 to 41, inclusive, same as 34 to 40, inclusive, in case 4045 (R. pp. 1241 to 1242).

GROUP D.

Assignment of errors relating to infringement of Jardine patent in suit.

Assignment 42 same as 41 in case 4045 (R. p. 1242).

43. The Court erred in approving and adopting the Special Master's finding of fact No. 39:

"That defendants' pistons, Exhibits 1, . . . and 8 do not embody the structure, function and mode of operation of the Jardine patent in suit."

and in not sustaining plaintiffs' exception (No. 46) to the aforesaid finding of fact No. 39.

44. The Court erred in approving and adopting the Special Master's finding of fact No. 44 and in not sustaining plaintiffs' exception (No. 55) to the following statements and conclusions in finding of fact No. 44:

- (a) " . . . that the prior art requires restriction of the patent (Jardine) to the employment of webs which are of sufficient lengths and thinness to permit flexing of these webs at the top of the skirt;
- (b) that Ex. 1 does not employ such characteristic webs;
- (c) that Ex. 8 does not employ such characteristic webs."

45. The Court erred in approving and adopting the Special Master's conclusion of law No. 38:

"That defendants' pistons, Exs. 1, . . . and 8 do not infringe the Jardine patent in suit."

and in not sustaining plaintiffs' exception (No. 90) to the aforesaid conclusion of law No. 38.

Groups and Assignments 46 to 67, inclusive, same as 45 to 66, inclusive, in case 4045 (R. pp. 1243 to 1247).

GROUP H.

Assignment of errors relating to infringement of Mooers patent in suit.

Assignment 68 same as 67 in case 4045 (R. p. 1248).

69. The Court erred in approving and adopting the Special Master's finding of fact No. 41:

"That defendants' pistons, Exs. 1, . . . 8 and 9 do not embody the structure, function and mode of operation of the Mooers patent in suit."

and in not sustaining plaintiffs' exception (No. 50) to the aforesaid finding of fact No. 41.

70. The Court erred in approving and adopting the Special Master's finding of fact No. 46 and in not sus-

taining plaintiffs' exception (No. 57) to the following statements and conclusions included in the Special Master's finding of fact No. 46:

- (a) "... that the prior art requires such a restriction; (of the connectors from the head to the top of the skirt in the Mooers patent to narrow connectors of restricted cross sections);
- (b) that in Exs. 1, ... 8 and 9 the connectors are heavy and not of a structure as described in the Mooers patent "..."

71. The Court erred in approving and adopting the Special Master's conclusion of law No. 40:

"That defendants' pistons, Exs. 1, ... 8 and 9 do not infringe the Mooers patent in suit."

and in not sustaining plaintiffs' exception (No. 92) to the aforesaid conclusion of law No. 40.

Groups and Assignments 72 to 82, inclusive, same as 71 to 81, inclusive, in case 4045 (R. pp. 1248 to 1250).

SUPPLEMENTARY PRAECIPE.

(Filed April 17, 1936.)

[Case No. 4046.]

To the Clerk:—

Please prepare a supplementary transcript of record for the Circuit Court of Appeals, Sixth Circuit, in the above entitled cause, including the following:

1. Caption.
2. Assignment of Errors (per copy attached).
3. This Supplementary Praecipe.
4. Clerk's Certificate.

Please deliver these documents, above noted, to The Gates Legal Publishing Company.

RICHY & WATTS

Counsel for Plaintiffs.

The foregoing praecipe, together with the Assignment of Errors as attached hereto and setting forth assignments of errors differing from the assignments of errors printed in full in Equity No. 4045 has been agreed upon by counsel for the respective parties subject to the approval of the Court for the purpose of supplying omissions from the printed record. The Assignments of Errors were inadvertently not included in the consolidated record on appeal of causes in Equity Nos. 4045, 4046, 4047.

It is further stipulated that the supplemental transcript of record be consolidated in form to agree with the main Consolidated Transcript of record on appeal of causes in Equity Nos. 4045, 4046 and 4047, and entitled Cleveland Trust Company and Chrysler Corporation vs. The Schriber-Schroth Company, No. 4045; Cleveland Trust Company and Chrysler Corporation v. The Aberdeen Motor Supply Company, No. 4046; and Cleveland Trust Company and Chrysler Corporation v. The F. E. Rowe Sales Company, No. 4047.

RICHEY & WATTS,
Counsel for Plaintiffs.

April 7, 1936.

Without waiving other objections to record.

JOHN H. BRUNING,
Counsel for Defendant.

April 15, 1936.

Dated: April 17, 1936.

APPROVED:

JONES,
United States District Judge.

CAPTION.

UNITED STATES OF AMERICA,
NORTHERN DISTRICT OF OHIO,
EASTERN DIVISION, ss.

Record of the proceedings of the District Court of the United States within and for the Eastern Division of the Northern District of Ohio, in the causes and matters hereinafter stated, the same being finally disposed of at a regular term of said court begun and held at the City of Cleveland, in said district, on the first Tuesday in April, being the third day of said month, in the year of our Lord one thousand nine hundred and thirty-four and in the one hundred and fifty-eighth year of the Independence of the United States of America, to-wit, on Friday, the 27th day of July, A. D. 1934.

Honorable PAUL JONES,
United States District Judge.

THE CLEVELAND TRUST COMPANY,
CHRYSLER CORPORATION,

vs.

THE F. E. ROWE SALES COMPANY.

No. 4047.

Equity.

Said action was commenced on the 17th day of October, A. D. 1931 and proceeded to final disposition at the term and day above written and during the progress thereof pleadings and papers were filed, process was issued and returned and orders of the court were made and entered in the order and on the dates hereinafter stated, to-wit:

ASSIGNMENT OF ERRORS.

(Filed April 17, 1936.)

[Case No. 4047.]

Now come plaintiffs, The Cleveland Trust Company and Chrysler Corporation, and present with their accompanying petition for appeal from the final decree entered herein, the following assignment of errors, which are hereinafter grouped with respect to subject matter:

GROUP A.

Assignment of errors relating to the validity of Gulick patent No. 1,815,733.

1. The Court erred in failing to find and hold the Gulick patent No. 1,815,733 good and valid in law, particularly as to claims 1, 4, 11, 12, 13, 15, 18, 22, 27, 28, 29, 30, 33, 34, 35, 36, 37, 38, 41, 42 and 43 thereof, and in failing to sustain plaintiffs' exceptions Nos. 2, 3, and 101.

Assignments 2 to 27 inclusive, same as in case 4045. (R. pp. 1233 to 1239.)

GROUP B.

Assignment of errors relating to infringement of the Gulick patent in suit.

28. The Court erred in not holding that defendant has infringed the Gulick patent No. 1,815,733, particularly as to claims 1, 4, 11, 12, 13, 15, 18, 22, 27, 28, 29, 30, 33, 34, 35, 36, 37, 38, 41, 42 and 43 thereof, and in failing to sustain plaintiffs' exceptions Nos. 45 and 102.

29. The Court erred in approving and adopting the Special Master's finding of fact No. 38,

"That defendants' pistons, Exs. 1, BBB, CCC, 3-J, 3-O and 8 do not embody the structure, function and mode of operation of the Gulick patent in suit."

and in not sustaining plaintiffs' exception (No. 44) to the aforesaid finding of fact No. 38.

30. The Court erred in approving and adopting the Special Master's finding of fact No. 43 and in not sustaining plaintiffs' exception (No. 54) to the following statements and conclusions in the aforesaid finding of fact No. 43:

(a) "... that the prior art requires restriction of the (Gulick) patent to the employment of webs

- which are of sufficient length and thinness to permit flexing of those webs at the top of the skirt;
- (b) that Exhibit 1 does not employ such characteristic webs;
 - (c) that Exhibit 8 does not employ such characteristic webs; and
 - (d) that Exhibits BBB and CCC * * * employ no webs at all."

Assignment 31 same as in case 4045 (R. p. 1240).

32. The Court erred in approving and adopting the Special Master's finding of fact No. 49,

"That such construction and arrangement (of the connectors from the head to the wrist pin boss in Exhibit 8) does not secure the mode of operation contemplated by the Gulick and Jardine patents."

and in not sustaining plaintiffs' exception (No. 60) to the aforesaid finding of fact No. 49.

33. The Court erred in approving and adopting the Special Master's finding of fact No. 50 and in not sustaining plaintiffs' exception (No. 61) to the following statements and conclusions in the said finding of fact No. 50:

"That Exs. BBB and CCC * * * do not employ any webs connecting the head with the skirt and, therefore, no webs of such flexibility as contemplated by the Gulick, Jardine and even Maynard patents, if the latter has such webs having such characteristics."

34. The Court erred in approving and adopting the Special Master's finding of fact No. 51,

"That defendants' pistons, Exs. 1, BBB, CCC, 3-J, 3-O, 8 and 9 employ the essential structure, function and mode of operation of the prior art, more particularly the Franquist patent No. 1,153,902 and Exs. 8 and 9, also the Chenard & Waleker French patent No. 463,595."

and in not sustaining plaintiffs' exception (No. 62) to the aforesaid finding of fact No. 51.

35. The Court erred in approving and adopting the Special Master's conclusion of law No. 37,

"* * * that defendants' pistons, Exs. 1, BBB, CCC, 3-J, 3-O and 8 do not infringe the Gulick patent in suit."

and in not sustaining plaintiffs' exception (No. 89) to the aforesaid conclusion of law.

GROUP C.

Assignment of errors relating to validity of the Jardine patent No. 1,763,523.

Assignments 36 to 42, inclusive, same as assignments 34 to 40, inclusive, of case 4045 (R. pp. 1241 to 1242).

GROUP D.

Assignment of errors relating to infringement of Jardine patent in suit.

Assignment 43 same as 41 in case 4045 (R. pp. 1242).

44. The Court erred in approving and adopting the Special Master's finding of fact No. 39,

"That defendants' pistons, Exhibits 1, BBB, CCC, and 8 do not embody the structure, function and mode of operation of the Jardine patent in suit."

and in not sustaining plaintiffs' exception (No. 45) to the aforesaid finding of fact No. 39.

45. The Court erred in approving and adopting the Special Master's finding of fact No. 44 and in not sustaining plaintiffs' exception (No. 55) to the following statements and conclusions in finding of fact No. 44:

- (a) "* * * that the prior art requires restriction of the patent (Jardine) to the employment of webs which are of sufficient lengths and thinness to permit flexing of these webs at the top of the skirt;
- (b) That Ex. 1 does not employ such characteristic webs;
- (c) that Ex. 8 does not employ such characteristic webs;
- (d) that Exs. BBB and CCC employ no webs at all."

46. The Court erred in approving and adopting the Special Master's conclusion of law No. 38,

"That defendants' pistons, Exs. 1, BBB, CCC and 8 do not infringe the Jardine patent in suit."
and in not sustaining plaintiffs' exception (No. 90) to the aforesaid conclusion of law No. 38.

GROUP E.

Assignment of errors relating to validity of the Maynard patent No. 1,655,968.

Assignments 47 to 56, inclusive, same as 45 to 54, inclusive, in case 4045 (R. pp. 1243 to 1245).

GROUP F.

Assignment of errors relating to infringement of Maynard patent in suit.

Assignment 57 same as 55 in case 4045 (R. p. 1245).

58. The Court erred in approving and adopting the Special Master's finding of fact No. 40,

"That defendants' pistons, Exs. 1, BBB, CCC do not embody the structure, function and mode of operation of the Maynard patent in suit."

and in not sustaining plaintiffs' exception (No. 48) to the aforesaid finding of fact No. 40.

59. The Court erred in approving and adopting the Special Master's finding of fact No. 45 and in not sustaining plaintiffs' exception (No. 56) to the following statements in the Special Master's finding of fact No. 45:

(a) "That the Maynard patent in suit describes a piston structure in which automatic compensation is not secured unless the groove E is cut into the webs F sufficiently and beyond the inside of the piston head flange to secure web extensions at the top of sufficient length and thinness to permit flexing of these web extensions at the top of the skirt; "

(b) that Ex. 1 does not employ such characteristic webs; and

(c) that Exs. BBB and CCC employ no webs at all."

60. The Court erred in approving and adopting the Special Master's conclusion of law No. 39,

"That the defendants' pistons, Exs. 1, BBB, CCC do not infringe the Maynard patent in suit."

and in not sustaining plaintiffs' exception (No. 91) to the aforesaid conclusion of law No. 39.

GROUP G.

Assignment of errors relating to validity of Mooers patent No. 1,402,309.

Assignments 61 to 68, inclusive, same as 59 to 66, inclusive, in case 4045 (R. pp. 1246 to 1247).

GROUP H.

Assignment of errors relating to infringement of Mooers patent in suit.

Assignment 69 same as 67 of case 4045 (R. p. 1248).

70. The Court erred in approving and adopting the Special Master's finding of fact No. 41;

"That defendants' pistons, Exs. 1, BBB, CCC, 3-O, 8 and 9 do not embody the structure, function and mode of operation of the Mooers patent in suit."

and in not sustaining plaintiffs' exception (No. 50) to the aforesaid finding of fact No. 41.

71. The Court erred in approving and adopting the Special Master's finding of fact No. 46 and in not sustaining plaintiffs' exception (No. 57) to the following statements and conclusions included in the Special Master's finding of fact No. 46:

(a) " . . . that the prior art requires such a restriction; (of the connectors from the head to the top of the skirt in the Mooers patent to narrow connectors of restricted cross sections);

(b) that in Exs. 1, BBB, CCC, 3-O, 8 and 9 the connectors are heavy and not of a structure as described in the Mooers patent " . . . "

72. The Court erred in approving and adopting the Special Master's conclusion of law No. 40:

"That defendants' pistons, Exs. 1, BBB, CCC, 3-O, 8 and 9 do not infringe the Mooers patent in suit."

and in not sustaining plaintiffs' exception (No. 92) to the aforesaid conclusion of law No. 40.

Remaining groups and Assignments 73 to 83, inclusive, same as 71 to 81 of case 4045 (R. pp. 1249 to 1250).

SUPPLEMENTARY PRAECIPE.

(Filed April 17, 1936.)

[Case No. 4047.]

To the Clerk:

Please prepare a supplementary transcript of record for the Circuit Court of Appeals, Sixth Circuit, in the above entitled cause, including the following:—

1. Caption.
2. Assignment of Errors (per copy attached).
3. This Supplementary Praecipe.
4. Clerk's Certificate.

Please deliver these documents, above noted, to The Gates Legal Publishing Company.

RICHEY & WATTS,
Counsel for Plaintiffs.

The foregoing praecipe, together with the Assignment of Errors as attached hereto and setting forth assignments of errors differing from the assignments of errors printed in full in Equity No. 4045 has been agreed upon by counsel for the respective parties subject to the approval of the Court for the purpose of supplying omissions from the printed record. The Assignments of Errors were inadvertently not included in the consolidated record on appeal of causes in Equity Nos. 4045, 4046, 4047.

It is further stipulated that the supplemental transcript of record be consolidated in form to agree with the main Consolidated Transcript of record on appeal of causes in Equity Nos. 4045, 4046 and 4047, and entitled Cleveland Trust Company and Chrysler Corporation v. The Schriber-Schroth Company, No. 4045; Cleveland Trust Company and Chrysler Corporation v. The Aberdeen Motor Supply Company, No. 4046; and Cleveland Trust Company and Chrysler Corporation v. The F. E. Rowe Sales Company, No. 4047.

RICHEY & WATTS,
Counsel for Plaintiffs.

April 7, 1936.

Without waiving other objections to record.

JOHN H. BAUNINGA,

Counsel for Defendant.

April 15, 1936.

Dated: April 17, 1936.

Approved: JONES,

United States District Judge.

CERTIFICATE OF CLERK

NORTHERN DISTRICT OF OHIO, SS. :

I, F. J. Denzler, Clerk of the United States District Court within and for said district, do hereby certify that the foregoing printed pages contain a full, true and complete copy of the pleadings in Equity Nos. 4046 and 4047 in accordance with the Supplementary Praecipe for transcript of record filed herein, the originals of which papers remain in my custody as clerk of said court.

In Testimony Whereof, I have hereto signed my name and affixed the seal of said court at Cleveland, in said district, this . . . day of April, A. D. 1936 and in the One hundred and sixtieth year of the Independence of the United States of America.

F. J. DENZLER,
Clerk,

By C. B. WATKINS,
Chief Deputy.

(Seal)

[fol. 2379] PROCEEDINGS IN THE UNITED STATES CIRCUIT
COURT OF APPEALS FOR THE SIXTH CIRCUIT

Causes Argued and Submitted May 4, 1937

Before Hicks, Simons and Allen, JJ.

These causes are argued by Newton D. Baker and F. O. Richey for Appellants and by J. H. Bruninga and J. H. Sutherland for Appellees and are submitted to the court.

DECREE No. 7223—Filed October 8, 1937

Appeal from the District Court of the United States for the
Northern District of Ohio

This cause came on to be heard on the transcript of the record from the District Court of the United States for the Northern District of Ohio and was argued by counsel.

On Consideration Whereof, It is now here ordered, adjudged and decreed by this Court that the decree of the said District Court in this cause be and the same is hereby set aside and the cause remanded for the entry of a decree granting the usual relief of injunction and accounting in respect to the infringement of claims 1, 11, 12, 13, 15, 18, 30 and 33 of Gulick, and claims 1, 6 and 8 of Maynard patent, which claims are valid and infringed by the Sterling piston, exemplified by Exhibit 1, and dismissing the bill with respect to the alleged infringements of Jardine, Mooers and Schmiedeknecht without prejudice. Costs of the appeal will be borne by the defendant.

[fol. 2380] DECREE No. 7224—Filed October 8, 1937

Appeal from the District Court of the United States for the
Northern District of Ohio

This cause came on to be heard on the transcript of the record from the District Court of the United States for the Northern District of Ohio, and was argued by counsel.

On Consideration Whereof, It is now here ordered, adjudged and decreed by this Court that the decree of the said

District Court in this cause be and the same is hereby set aside and the cause remanded for the entry of a decree granting the usual relief of injunction and accounting in respect to the infringement of claims 1, 11, 12, 13, 15, 18, 30 and 33 of Gulick, and claims 1, 6 and 8 of Maynard patent, which claims are valid and infringed by the Sterling piston, exemplified by Exhibit 1, and dismissing the bill with respect to the alleged infringements of Jardine, Mooers and Schmiedeknecht without prejudice. Costs of the appeal will be borne by the defendant.

DECREE No. 7225—Filed October 8, 1937

Appeal from the District Court of the United States for the Northern District of Ohio

This cause came on to be heard on the transcript of the record from the District Court of the United States for the Northern District of Ohio, and was argued by counsel.

On Consideration Whereof, It is now here ordered, adjudged and decreed by this Court that the decree of the said District Court in this cause be and the same is hereby set aside and the cause remanded for the entry of a decree granting the usual relief of injunction and accounting in respect to the infringement of claims 1, 11, 12, 13, 15, 18, 30 and 33 of Gulick, and claims 1, 6 and 8 of Maynard patent, which claims are valid and infringed by the Sterling piston, exemplified by Exhibit 1, and dismissing the bill with respect to the alleged infringements of Jardine, Mooers and Schmiedeknecht without prejudice. Costs of the appeal will be borne by the defendant.

OPINION—Filed October 8, 1937

[fol. 2381] [Stamp:] Filed Oct. 8, 1937. John W. Mennies,
Clerk

Nos. 7223-4-5

UNITED STATES CIRCUIT COURT OF APPEALS, SIXTH CIRCUIT

No. 7223

THE CLEVELAND TRUST COMPANY, CHRYSLER CORPORATION,
Appellants,

v.

THE SCHREIBER-SCHROTH COMPANY, Appellee

No. 7224

THE CLEVELAND TRUST COMPANY, CHRYSLER CORPORATION,
Appellants,

v.

THE ABERDEEN MOTOR SUPPLY COMPANY, Appellee

No. 7225

THE CLEVELAND TRUST COMPANY, CHRYSLER CORPORATION,
Appellants,

v.

THE F. E. ROWE SALES COMPANY, Appellee

Appeals from the District Court of the United States for
the Northern District of Ohio, Eastern Division

Decided October 8, 1937

Before Hicks, Simons and Allen, Circuit Judges

SIMONS, Circuit Judge:

In a study of the patents and prior art involved in
Wahkesha Motor Co. v. Willys Overland, Inc., 77 Fed. (2d)
906, and The Perfect Circle Co. v. Hastings Mfg. Co.,
88 Fed. (2d) 813, we learned something of the principles

of operation and the mechanics employed in the conventional four-cycle internal combustion engine of the modern [fol. 2382] motor car. It will therefore be unnecessary here to repeat what was there said in reference thereto. In the first we considered the explosion chamber, and in the second the piston ring. In the present infringement suit we deal with the piston.

In the rapid reciprocation of a piston within the cylinder, as in the references described, the desirability of maintaining a close fit was obvious and had long been recognized. This was necessary to avoid waste of power through gases being permitted to pass below the piston from the explosion chamber, a condition known as "blow-by," to prevent lubricating oil passing above the piston into the explosion chamber, a condition known as "pumping oil," and to prevent the slapping of the piston in the cylinder, making for a noisy engine and tending to break its parts. On the other hand a too close fit would, because of the expansion of the piston by the great heat generated in the cylinder, cause it to bind or "seize" therein, thus stalling the engine or perhaps even wrecking it.

Cylinders were and generally still are cast of iron, and prior to the period we are here considering pistons were likewise so cast. The disadvantages in this organization were early recognized. Since iron is a poor conductor of heat, the particles of carbon that would form on the cylinder head would become overheated and cause premature explosion in the combustion chamber. Iron is also heavy, and with the great acceleration of piston reciprocation, due to the ever increasing demand for speed, the industry began to cast about for expedients to lighten the pistons. There were numerous effects and failures in this respect with the conventional iron trunk piston. Lighter metals were considered, but since strength and durability to withstand the great force of rapid explosions upon the piston head and the powerful thrust imparted to its bearing faces by the power stroke of the piston as it imparted energy to the crank shaft were prerequisites, the art was limited to metal that was both strong and durable. It turned, therefore, quite naturally and inevitably, to aluminum. A new and for a long time seemingly insuperable problem at once confronted the automotive engineers, due to the fact that the coefficient of expansion differs greatly in the two metals,

and that under heat aluminum will expand much more rapidly than iron. Since the desirable clearance is minute, approximating one one-thousandth of an inch, it was at once clear that an aluminum piston, installed when cold with required clearance in an iron cylinder, would when heated by operation seize, and that a piston with clearance [fol. 2383] sufficient to avoid seizing would waste power, pump oil, cause undesirable noises, and lack durability.

Ingenious, numerous and varied were the expedients resorted to in an effort to achieve the clearly recognized advantages of aluminum pistons, while at the same time avoiding troublesome results, and equally numerous were the failures, by reason of which a prejudice had developed in the industry against them, and it was said they had had a "black eye."

The Cleveland Trust Company, appellant, is the repository of numerous patent rights assigned to it by inventors and by piston and automobile manufacturers, and it is its contention that the aluminum piston problem was completely solved by some of its assignors, and that a structure embodying the disclosures of the patent to Jardine, No. 1,763,523, granted June 10, 1930, but in a more specific and improved form described in Maynard No. 1,855,968, granted January 10, 1932, but on an application later than Jardine's, had gone into wide commercial use, being accepted by the industry, with the exception of some divisions of the General Motors Corporation, had sold in the tens of millions, and is now infringed by pistons of the appellees. The Jardine and Maynard patents belong to the Trust Company. Conceiving, however, that a Gullick application, which was being presented by the Packard Motor Car Company, would, with its broader claims, dominate both Jardine and Maynard, the Trust Company purchased it and prosecuted it to successful conclusion after numerous interferences, the patent issuing as Gullick No. 1,815,733, on July 21, 1931. The Trust Company also owns Schmiedeknecht patent No. 1,256,906, granted February 12, 1918, and Mocera, No. 1,402,309, granted January 3, 1923, both for pistons, and seven accused devices are all alleged to infringe some of the claims of some or all of the five patents.

The appellees are three Cleveland dealers who have sold alleged infringing pistons manufactured by the Sterling Products Corporation of St. Louis, Missouri. While the

manufacturer was named in the original bills of complaint they were dismissed as to it, it being understood, however, that Sterling Products Corporation was conducting the defense of the three suits. By stipulation they were consolidated below, and all are before this court upon same record. At the outset only two alleged infringing devices were involved, one a Sterling piston known as Exhibit 1, and the other a Ray-Day piston known as Exhibit 2. During the progress of the trial five additional structures were introduced as infringements. While there is no finding [fol. 2384] ing to that effect, it seems to have been assumed that all of the alleged infringing devices were sold by each of the three defendants. The consolidated cause was referred to a master, whose very detailed findings of fact and conclusions of law were affirmed by the District Judge without discussion and decrees entered dismissing the bills. While the Chrysler Corporation appears as party plaintiff below and as co-appellant here, it has never entered its appearance and its presence in the case as a nominal plaintiff is due to the fact that it owns a half interest in the Maynard patent and was therefore joined as party plaintiff. An issue raised below as to the propriety of Chrysler being made a nominal party is abandoned here, since the defendants have not appealed.

The controversy is involved and has been bitterly fought. The record is voluminous, the exhibits, physical and otherwise, numerous, the patent office history discloses persistent challenge, and of eighty-odd claims fifty-two are said to be infringed. While we have given careful consideration to the briefs and record, it is manifest that the necessities of the case and the desirable limit of an opinion will permit us to discuss only the more salient features of the controversy, with perhaps summary disposition of its lesser issues, for the challenge to the validity of the patents and to the fact of their infringement includes most if not all of the defenses known to the patent law.

We deal first with the patent to Galick, in agreement with the contention that if valid it is basic. Galick has been connected with various motor car and motor cycle manufacturing companies in a number of capacities, including that of factory manager. He was also an inventor, having prosecuted some fifty applications in the patent office. As early as 1908 he had a conception of a split and

flexible piston, but did nothing more for several years than to make sketches. In 1911 he made some experiments with modified standard iron pistons, giving them block tests in a motor cycle and in an Excelsior motor. The motor was later put into a Renault car and given a substantial road test. These early pistons were scrapped. In 1914 he made his first test with aluminum pistons in an Amplex car, which he used personally for some 4500 to 5300 miles. In 1917, along with other patents and patent applications, Gulick assigned his inchoate rights to the Packard Motor Car Company, and the application for the piston patent was filed by it on November 30th of that year. There followed long discussions with the examiners, administrative reviews, bitterly contested interferences, and appeals to [fol. 2385] the Court of Appeals of the District of Columbia (*Long v. Gulick*, 17 Fed. [2d] 686), and to the Court of Customs and Patent Appeals (*Hartog v. Long*, 47 Fed. [2d] 369). There had also been amendments to the original application at the instance of the inventor's assignee. It was not until July 21, 1931, that the Gulick patent issued with its forty-three claims.

The Gulick patent is for a combination of elements, many, if not indeed all of which, are to be found in the prior art. Nowhere, however, is found his precise organization, and the question at once presents itself as to whether there was exercise of the inventive faculty in the concept of their combination, for that a new result was achieved and a new mode of operation of an aluminum piston in its iron cylinder brought about is not successfully challenged on this record. Gulick separated the smaller ring carrying head of the piston from the somewhat larger skirt by a groove or air gap. This tends to prevent the passage of heat from the head directly to the skirt and permits the bearing faces of the skirt to yield to pressure independently of the head. The wrist pin bosses are pulled inwardly from the skirt periphery, and instead of being supported by the skirt are carried from the piston head by depending flanges, thus providing a vertically rigid support for the bosses with freedom of lateral motion in a direction at right angles to the load thrusts on the piston. The surface of the skirt where the bosses are connected to the head in conventional pistons was cut away or relieved, so that the bosses are not directly constrained by the cylinder

all. They are held in place by webs extending in the general direction of load thrusts on the piston. One bearing face of the skirt is slotted vertically from the bottom edge up to and connecting with the air gap. That Spillman and Mooers patent 1,092,870, and Franquist patent 1,153,902 showed air gaps between piston head and skirt, or that splitting the piston skirt vertically or combining the vertical and longitudinal splits into the so-called T-slot were old practices, is not conclusive on the question of invention.

Since the cylinder head is the first to heat, and becomes hotter than the skirt it had always been machined with greater clearance, the control of oil and gas flow being taken care of in part at least by the piston rings, which function as a packing. See *Perfect Circle Co. v. Hastings*, supra. The problem of maintaining a close fit between an aluminum piston and an iron cylinder without seizing under heat expansion is a problem involving the skirt, which guides the piston and carries the bearings for the wrist pin, [fol. 2385] upon which is exerted the thrusts of the connecting rod through the cycle of reciprocation. To decelerate the flow of heat from piston head to skirt by an air gap was perhaps an obvious expedient in the art. To slit the skirt vertically so that pressure of the cylinder wall would compensate for thermal expansion was perhaps not beyond expected skill in the art. Minute relief of the cylinder periphery in the region of the bosses was shown in Franquist. But to combine insulation of head from skirt, retraction of the bosses from the skirt periphery, connection of such bosses to the skirt with webs laterally flexible and yet so carried from the head as to support the load upon the wrist pin with sufficient strength and rigidity, and to utilize the mechanical force of the cylinder wall upon the skirt and the thermal expansion of the bosses so as to compensate evenly and fully for head expansion and to secure a balanced flexibility of the skirt with no bending concentration at any point therein, discloses, we think, a meritorious concept beyond the reach of those skilled in the art. Franquist, of course, does disclose the broad concept of a flexible skirt. But Franquist gives no hint at all of the Gulick invention. His flexibility was obtained by grooves on the accordion principle, which while they interrupted the outer periphery of the piston skirt, did not destroy its inner unity. Some flexibility no doubt it had, but certainly

not in the sense that Gulick disclosed it, and it is doubtful that the Franquist piston could have met the severe tests required by the industry. And of commercial history it has none upon this record.

Probably the most difficult task that confronts a patent court lies in determining whether there is invention in a combination whereof many or all cooperating elements are old, and when concepts, however remarkable when disclosed, have in a rapidly developing art already become commonplace, not only to the expert but to the unskilled. It is not easy after the lapse of years to evaluate advances with the "eye and the understanding" of those in the field when they were made. Inventive concept is an abstraction impossible to define, and so courts have sought for simple rules by which its presence may be detected. These have proved helpful, even though never absolute. Long recognition of an existing problem in any art, and the advantages to accrue to an industry from its solution, coupled with repeated failures to find solution, has ever been considered as highly persuasive of invention when success is finally attained. Sometimes achievement is revolutionary, an abandonment of all previous approaches, and the chart-[fol. 2387] ing of a new way to the goal. More often the inventor begins where others leave off, and perceives the vital forward step to which predecessors had been blind. Even then success may not be fully recognized until the world gives acclaim.

The present record is conclusive of the long unsuccessful search for a light weight piston sufficiently durable to obviate the well-known disadvantages of the iron trunk piston in high speed engines. There was much research and experimentation by those most highly skilled, including the engineers of the Aluminum Company, Colonel Vincent of the Packard Motor Car Company, one of the designers of the Liberty engine, and the engineering staff of the Franklin Automobile Company, under the direction of the defendants' expert Stellman, its Chief Engineer. Limited success may here and there have been attained, but the problem in its full sweep was not solved until the Gulick concept, carried forward to some extent by Maynard, with possibly some instruction from Jardine, reached commercial embodiment. Then and then only did the industry by acceptance of the Aluminum Company's piston answering the Maynard draw-

ing and specification, recognize the complete solution of the problem, and the many millions that have since been sold and used have set the seal of commercial approval upon such solution. It is idle to say in an imperfect world that invention should be denied because no piston, not even Maynard, performs perfectly.

It is, of course, axiomatic that commercial success is not of itself conclusive upon the question of novelty or invention, and where such success is fairly attributable to other causes, such as the reputation of the manufacturer, his extensive advertising and superior salesmanship, it will be wanting in persuasiveness. But where no alternative inferences are to be drawn, commercial success is highly indicative of invention. This is so in the usual case where the test of success is acceptance by the public. But it must be here noted if not elsewhere observed, that where success follows acceptance by experts rather than by those unskilled, it is of far greater tribute to the ingenuity of the inventor. It is clearly demonstrated upon this record, if indeed it is not within the field of general knowledge, that the automotive industry in acceptance of new devices upon which success of highly complicated and delicate machinery in the hands of inexpert users must depend, exercises the greatest caution, and things new, whatever their theoretical virtue, will not be considered until they have been subjected to the most rigorous practical tests for efficiency and durability. [fol. 2388] This must be so when failure of one year's product may bring tremendous losses or complete disaster.

So also with respect to the presumption that attaches to the validity of a grant by the Patent Office. Where, as in this case, substantially all pertinent prior art has been cited against the patent, where in hard fought interferences novelty and invention have been challenged, and where priority of conception has been finally adjudicated only upon repeated review in both administrative and judicial forums, the patent should not be stricken down except upon very clear and convincing proof of invalidity. The weight to be given this presumption has been so recently and so thoroughly discussed, and the rule stated in all the varying formulas by which courts have announced and affirmed it, in *Radio Corporation v. Radio Laboratories*, 293 U. S. 1, that it is unnecessary here to repeat or to cite additional cases.

In what we have said thus far it is perhaps clear that in respect to novelty and invention over recorded prior art we have concluded the Gulick patent to be valid. But this is not the whole controversy with respect to it. It is the contention of the defendant that the Gulick patent is invalid because abandoned by him prior to his application, and because it had been in public use in this country for more than two years before such application within the purview of R. S. §§4886, 4920. The Master so held. His findings were based on the fact that Gulick's 1911 and 1914 pistons had been scrapped, and on inference that Gulick's expressed satisfaction with his 1914 experimentation was conclusive of the completion of his invention in that year. That there had been no formal abandonment or disclaimer is clear. The Master's findings are based upon constructive abandonment deduced from the above circumstances and delay in applying for a patent.

Questions relevant to actual or to constructive abandonment of inventions are questions of fact, Walker, 6th Ed., §152; Kendall v. Winsor, 21 How. 330, and much weight must therefore be given to the findings of the Master, who saw and heard the witnesses. Consideration should also be given to the rule that concurrent findings of Master and Judge should not be set aside except for clear error, although this may prove to be an unsafe guide to just decision where exceptions to a Master's report are unilluminated by oral argument and a decree entered without elucidation of the reasons upon which it is based. The law, however, in reference to abandonment, requires that every reasonable doubt relevant to any such question should be resolved in favor of [fol. 2389] the patent, for it does not favor forfeiture. Walker, §152 and cases there cited. It was said by this court, Gear Grinding Machine Co. v. Stadelbaker Corp., 270 Fed. 934, 936: "Abandonment depends upon intent, actual or imputed. The actual intent did not exist, and the circumstances do not require that the intent be by law imputed as against the truth." That Gulick did not intend to abandon the subject matter of his invention seems to us clear. From the beginning of his experimentation in 1911 he made drawings from time to time, tests with slotted iron pistons and later with slotted aluminum pistons, and was at the same time not only busy in the earning of a livelihood but with plans for the purchase from a receiver of the prop-

erty of the Amplex Motor Car Company. The scrapping of his experimental pistons was without his knowledge or consent, and the fact that he replaced the experimental pistons of the Renault car with standard pistons before its sale negatives any inference that the experimental pistons were intended to be abandoned. Distinction must also be made between abandonment of the subject matter of a patent and abandonment of crude experimental devices. While Gulick variously expressed satisfaction with the performance of his experimental pistons, it is clear upon review of his entire evidence that what he had then in mind was that they performed satisfactorily in reference to clearance. They had not demonstrated their strength and durability, or that they were properly designed or machined for commercial use.

The Master was largely influenced by the fact that Gulick's clarification of his testimony followed a recess, and gave little credence to it. We have reviewed it carefully. That Gulick's experiments were not completed to the end that a practical piston had been fully designed and tested seems clear. He is in some respects corroborated and in no wise impeached. Mere suspicion as to his good faith is not such clear and convincing proof of abandonment as will satisfy every reasonable doubt and sustain the heavy burden which rests upon those challenging the validity of his patent. The Master did not apply to the evidence on the issue of abandonment that standard of proof required to establish it and so the question is one of law, and the finding must be rejected.

There was no public use of the Gulick invention more than two years prior to the application so as to invalidate the patent. So long as use by the inventor can fairly be considered experimental and collateral to the development of the invention in its complete form, the bar of the statute does not begin to run. *Reo Motor Car Co. v. Gear Grinding Co.*, 43 Fed. (2d) 965 (C. C. A. 8). The emphasis that is laid [fol. 2390] upon Gulick's use of a car with experimental pistons for business and pleasure for a considerable period does not impress us. Road tests of many thousands of miles are considered necessary to determine the efficiency of an engine and its parts. That such transportation is not wasted does not of itself constitute a public use. As was said in the second *Gear Grinding* case: "We see no principle in the precedents or in the policy of the statute which would re-

quire a valuable invention to be lost by permitting the bar to begin to run while the invention . . . is being gradually improved and developed up to the point of ascertaining whether it has real utility. Nor can it rightly be said that a public use of a developing and incomplete invention—incomplete as finally claimed—can nevertheless operate as a public use bar because adding the final element of perfection did not involve invention as compared with the earlier form to which it was added."

We are not convinced that the Gulick application was broadened to include new matter after intervening rights had arisen. This issue was adjudicated in the Court of Appeals of the District of Columbia, 17 Fed. (2d) 365, and the Court of Customs and Patent Appeals, 47 Fed. (2d) 366, 367. With the conclusions there reached we agree. As to the Monckmeir and Schoenagarth prior uses, it is sufficient to say without analysis of the voluminous evidence, that they rest mainly upon the uncertain memory of witnesses testifying long after the event, and this does not rise to the dignity of proof requisite to establish prior use. *Barbed Wire Patent Case*, 143 U. S. 275; *Bibel Process Case*, 261 U. S. 45.

Jardine, upon an application filed March 11, 1920, claimed an invention of which the chief object was construction of a light alloy piston which would operate satisfactorily at all temperatures and lend itself to economic methods of manufacture. He cut away all the skirt portions at the webs, extending the latter to nearly the length of the skirt parts or slippers. Horizontal slots partially insulated the slippers from the head and these were split vertically to render them yieldable to contact with the cylinder wall. The head was integrally connected to the skirt only in the region above the bores. His thought was that since heat expansion tends to increase the diameter of the piston in a direction parallel with the wrist pin bores, when the skirt around the bores is removed, the central part of the web is free to move while its ends are restrained and resisted by the skirt faces in contact with the cylinder wall. There is insistent challenge and an insistent defense of the validity of Jardine. [cf. 2391] On the one hand it is urged that Jardine is but the slipper structure of Ricardo patent No. 1,204,833, and that it involved no invention to merely slit vertically its skirt parts as disclosed by Gulick and others. The response

is that Jardine discloses a combination of inter-related operating parts that goes far beyond Ricardo, is economical to construct and carries the Gulick concept an important step forward. Jardine indicates the forces, thermal and mechanical, which bear upon the flexible web to compensate for heat expansion of the cylinder head, pointing to the web as being in effect a cantilever structure, weakest at its supports. Jardine came to the attention of the Aluminum Company and the Maxwell at a time when Ricardo and other English engineers were trying to modify the Ricardo piston to meet the piston problem. It was thought to give great promise. Tests had been made and commercial manufacture planned when the Maynard piston was presented to them. It appeared so much better that the construction illustrated and described by him was adopted. Since it is the Maynard specific form embodying the basic concept of Gulick that made commercial piston history, since Jardine was without substantial commercial recognition and none of the accused devices are slipper pistons, since whatever Jardine contributed to the art, if anything, is said to be incorporated in Maynard and since the really important infringement is said to be the copying by the defendants of the commercial embodiment of Maynard, we feel under no necessity at this time of ruling upon the validity of the Jardine patent or the fact of its infringement.

Maynard upon a patent application filed January 3, 1931, embodies the Gulick combination of skirt insulation, skirt flexibility by means of vertical slotting cooperating with longitudinal slotting, and flexible webs in the region of the wrist pin bosses. He also follows Jardine's simplified design to permit economical manufacture and Jardine's boss relief. The Maynard piston, however, is not a slipper piston. While Jardine carried the webs nearly to the bottom of the skirt and omitted all of the skirt on the web faces, Maynard provided webs about two-thirds of the length of the skirt and continued the latter circumferentially below the webs except for a single vertical slot throughout one bearing face of the skirt. This structure increased the effect of heat on retarding the expansion of the piston so as to permit of a narrowed web. The upper part of the skirt, which reaches higher temperature, is provided with greater compensation against heat expansion [fol. 2392] by having its periphery interrupted by relief

about the bosses. The lower part of the skirt requires no interruption of its periphery other than the vertical slot because it receives less heat. This results in a better bearing surface and means additional to the piston rings for closing the passage between the piston and the cylinder wall. It is clear that Maynard, while not departing from the teaching of Gulick in basic combination of elements, discloses a piston lighter and more economical of manufacture than Gulick and one more rugged and durable than Jardine. That the Maynard piston had a very great effect upon the industry and substantially advanced the art, there can be no doubt upon this record. In the precise form disclosed by Maynard and depicted in his drawings, many thousands were made and successfully used. In a somewhat modified form its production and use has run into very many millions.

Little is claimed for Mooers and Schmiedeknecht, and while some of the claims of each may possibly read on some of the accused structures, they have apparently no commercial history and have not substantially advanced the art. We do not pass upon them, and apprehend that the real controversy here is in respect to validity and infringement of Gulick and Maynard.

Of the devices charged to infringe, the one of prime importance to the plaintiff is undoubtedly the Sterling piston, exemplified by Exhibit 1. The defendants seek to avoid infringement by this structure, which with slight modification, follows the drawings and description of the Maynard patent, and without change, the commercial structure of the plaintiff's licensee, by the contention that its webs are rigid at the top and thus it is distinguished from Maynard, compensation for rigidity being achieved by reducing the thrust faces of the piston skirt at an angle to the vertical sides of the web, giving to the relief in the region of the bosses the so-called "keystone" configuration. But there are no limitations in the claims in suit as to the region of flexibility in the webs, and if the keystone relief provides greater flexibility at the union of the webs with the skirt, it is but a difference in degree, and not one of mode of operation or result and will not avoid infringement. In comparing commercial embodiments of invention with the drawings of patents it is not unusual to find that without departing from the teachings of the inventor improved

operation may result from some modification of the disclosure. This court has indicated, *Gordon Form Lathe Co. v. Walcott Machine Co.*, 32 Fed. (2d) 55, 61, that superiority of operation, even when brought about by a valuable [fol. 2393] improvement which perhaps was patentable as such, will not of necessity negative infringement, citing *Schiedel Toy, etc., Co. v. Clark*, 217 Fed. 760, 771, *Toledo Machine & Tool Co. v. E. W. Bliss Co.*, 287 Fed. 443, 447. The Gordon and Redlin patent there considered was in a true sense a pioneer patent and entitled to broad equivalents, but this does not mean that meritorious inventions which substantially advance the art are entitled to no reasonable range of equivalency. As was said in *Eibel Process* case, *supra*, at 63: "Eibel made a very useful discovery which has substantially advanced the art. His was not a pioneer patent creating a new art; but a patent which is only an improvement on an old machine may be very meritorious and entitled to liberal treatment. Indeed, when one notes the crude working of machines of famous pioneer inventions and discoveries, and compares them with the modern machines and processes exemplifying the principle of the pioneer discovery, one hesitates in the division of credit between the original inventor and the improver; and certainly finds no reason to withhold from the really meritorious improver, the application of the rule '*Ut res magis valeat quam pereat*' which has been sustained in so many cases in this court." A careful consideration of the patents to Gulick and Maynard, an analysis of the claims of each in suit, and a review of the evidence as to principles and modes of operation, lead us inevitably to the conclusion that the Sterling piston (Exhibit 1) infringes the claims in suit of both, and that such minor differences as appear in the commercial embodiment of Maynard, with which Exhibit 1 is identical, do not fall without the reasonable range of equivalents to which the inventors' contribution to the advancement of the art entitles them.

In the remaining second device we find no infringement. True, there is similarity. Here and there are identical elements, singly and in combination, but the complete combination upon the conception of which we found Gulick and Maynard to denote invention, does not in any others appear, and so it must be said here as in *Gear Grinding Machine Co. v. Stodolaker Corporation*, *supra*, in reference

to such situation: "It is the patentee's necessary dependence upon the co-operation of all the elements in one machine in order to make the claims valid that also makes this achievement possible."

We find claims 1, 11, 12, 13, 15, 18, 30, 33 of Gulick and Maynard patent in respect to all of the claims sued upon valid. We find such claims to be infringed by the Sterling piston exemplified by Exhibit 1. The decrees below are set aside and the causes remanded for the entry of decrees [fol. 2394] granting the usual relief of injunction and accounting in respect to such infringement as has been found and dismissing the bills with respect to the alleged infringements of Jardine, Mooers and Schmiedeknecht, without prejudice. Costs of appeal will be borne by the defendants.

[fol. 2395] UNITED STATES CIRCUIT COURT OF APPEALS FOR
THE SIXTH CIRCUIT

I, J. W. Menzies, Clerk of the United States Circuit Court of Appeals for the Sixth Circuit, do hereby certify that the foregoing is a true and correct copy of record and proceedings in the cases of The Cleveland Trust Company and Chrysler Corporation vs. The Scriber-Schroth Company, The Aberdeen Motor Supply Company, The F. E. Rowe Sales Company, No. 7223-4-5, as the same remains upon the files and records of said United States Circuit Court of Appeals for the Sixth Circuit, and of the whole thereof.

In testimony whereof, I have hereto subscribed my name and affixed the seal of said Court at the City of Cincinnati, Ohio, this 30th day of December, A. D. 1937.

J. M. Menzies, Clerk of the United States Circuit Court of Appeals for the Sixth Circuit. (Seal)

[Vol. 2306] SUPREME COURT OF THE UNITED STATES

No. 3

(October Term, 1933)

(Leave Allowing Certiorari—Filed May 21, 1934)

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Fifth Circuit is granted. And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though it were a response to such writ.

[Vol. 2307] SUPREME COURT OF THE UNITED STATES

No. 4

(October Term, 1933)

(Leave Allowing Certiorari—Filed May 21, 1934)

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Fifth Circuit is granted. And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though it were a response to such writ.

[Vol. 2308] SUPREME COURT OF THE UNITED STATES

No. 5

(October Term, 1933)

(Leave Allowing Certiorari—Filed May 21, 1934)

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Fifth Circuit is granted. And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though it were a response to such writ.

Supreme Court of the United States

I, Charles E. Evans, Clerk of the Supreme Court of the United States, do hereby certify that the foregoing Volumes I, II, III, IV and V, pages, numbered from -- 1 -- to -- 2,596 --, inclusive, contain a true copy of the Record as printed for use in this Court

----- in the case of
THE SCHRIER-SCHROTH COMPANY, Petitioner;
THE ABBOTT MOTOR SUPPLY COMPANY, Petitioner; and
THE F. E. ROWE SALES COMPANY, Petitioner,
vs.

THE CLEVELAND TRUST COMPANY, CHRYSLER CORPORATION.

Nov. 3, 4, and 5, October Term, 1938, as the same remain upon the files and records of said Supreme Court.

In testimony whereof I hereunto subscribe
my name and affix the seal of said
Supreme Court, at the City of Washing-
ton, this -- fourteenth -- day
of -- March --, A. D. 1939..

States, do hereby certify that the foregoing

pages, numbered from - - 1 - to - - - 2,396 - - - , inclusive,

contain a true copy of the Record as printed for use in this Court

- - - - - in the case of

THE SCHRIER-SCHROTH COMPANY, Petitioner;
THE ABERDEEN MOTOR SUPPLY COMPANY, Petitioner; and
THE F. E. ROWE SALES COMPANY, Petitioner,
vs.

THE CLEVELAND TRUST COMPANY, CHRYSLER CORPORATION.

Nos. 3, 4, and 5, , October Term, 1938 , as the same remain upon the
files of said Supreme Court.

In testimony whereof I hereunto subscribe
my name and affix the seal of said
Supreme Court, at the City of Washing-
ton, this - - fourteenth - - - day
of - - March - - - , A. D. 1939..

Charles Edmund Croft
Clerk of the Supreme Court of the United States.